

September 6, 2002

Mr. Dave Woolley
General Mills
707 Pillsbury Lane
New Albany, IN 47150

Re: **043-15987-00050**
Notice-only change to
MSOP 043-10995-00050

Dear Mr. Woolley:

General Mills was issued a permit on November 9, 1999 for stationary refrigerated baked goods production process. A letter notifying the Office of Air Quality of the addition of a dry mix central vacuum system was received on May 13, 2002. Pursuant to the provisions of 326 IAC 2-6.1-6 the permit is hereby revised as follows:

On May 13, 2002, General Mills submitted an application to install and operate one (1) upstairs dry mix central vacuum system, collecting fugitive raw materials at a maximum rate of 105 pounds per hour, with emissions controlled by a dust collector, and emissions exhausted through Stack 140. The collected product will be disposed of.

The proposed vacuum system will generate PM and PM10 emissions, but will not cause an increase in emissions from any existing units because the vacuum system operates independent of the other existing emission units. The unrestricted potential to emit (UPTE) from the proposed vacuum system is estimated based on emissions after controls because the dust collector is determined to be integral to the vacuum system. This approach is consistent with the approach used to determine the existing vacuum system UPTE as described below.

In the original MSOP application (043-10995-00050, issued on November 9, 1999), the company submitted the following justification as to why the dust collectors/baghouses (including the dust collectors associated with the existing vacuum system) should be considered an integral part of the various pneumatically conveyed bins and collectors:

- (a) The primary purpose of the process is to collect raw materials and ingredients for a clean working environment, not to collect regulated particulates. The dust collector is a "filter/collector" which ensures that fine raw material and ingredients are not blown into the air. The raw materials are conveyed pneumatically.
- (b) The process could not be operated without the dust collectors also being in operation since the dust collectors are required to ensure that the all of the raw materials are collected and the floors are clean.

Based on this justification, the IDEM, OAQ determined that the dust collectors/baghouses (including the dust collectors associated with the existing vacuum system) are an integral part of the process. The UPTE was therefore determined based on emissions after controls.

Since the proposed vacuum system is similar in design to the existing vacuum system (pneumatically conveyed with the vacuum not being able to operate without its associated dust collector), the proposed vacuum system UPTE is determined based on the methodologies used to estimate the existing vacuum system UPTE, emissions after controls.

Based on a standard air flow rate of 465.70 scfm and an outlet grain loading of 0.02 gr/scf, the PM UPTE is estimated to be 0.35 ton/yr.

$$0.02 \text{ gr/dscf} * 465.70 \text{ dscf/min} * 60 \text{ min/hr} * 8760 \text{ hr/yr} * 1/7000 \text{ lb/gr} * 1/2000 \text{ ton/lb} = 0.35 \text{ ton PM/yr}$$

PM10 is determined to be equal to PM.

The proposed modification shall therefore be incorporated into the MSOP via a notice only change because the PM/PM10 thresholds are less than the minor permit threshold of 5 tons per year under 326 IAC 2-6.1-6(g)(4)(A).

To incorporate the proposed modification into the permit, the following changes shall be made:

- (1) Condition A.2: The unit description of Condition A.2 shall be amended as follows to reflect the new vacuum system.

.....

- (aa) one (1) pneumatically conveyed flour bin, designated Western, with dust collector DC36, exhausting through Stack No. 108;
- (bb) three (3) pneumatically conveyed unloader bins, designated Nos. 1, 2, and 3, with dust collectors DC54, DC53, and DC52, respectively, exhausting through Stack Nos. 139, 137, and 138, respectively;
- (cc) **one (1) upstairs dry mix central vacuum system, collecting fugitive raw materials at a maximum rate of 105 pounds per hour, with emissions controlled by a dust collector, and emissions exhausted through Stack 140;**
- (dd) four (4) scrubbers, designated PKL Rotoclone, BRL, C1L, and C2L, for removal of carbon dioxide refrigerant from the employee occupied area, exhausting through Stack Nos. 52, 60, 70, and 65, respectively;
- (ee) one (1) Safety Kleen cold cleaner degreaser, designated No. 87, exhausting inside, using a maximum of 0.056 gallons of solvent per day;
- (ff) one (1) 12,000 gallon No. 2 fuel oil storage tank, exhausting through Stack No. 12, constructed in 1978;
- (gg) two (2) 14,000 gallon alcohol storage tanks, exhausting through Stack Nos. 13 and 14, respectively, constructed in 1982 and 1985, respectively; and
- ~~(gg)~~ (hh) one (1) stick welding operation.

- (2) Section D.2: The unit description of Section D.2 shall be amended as follows to reflect the new vacuum system.

Emissions unit Description

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- (aa) one (1) pneumatically conveyed flour bin, designated Western, with dust collector DC36, exhausting through Stack No. 108;
 - (bb) three (3) pneumatically conveyed unloader bins, designated Nos. 1, 2, and 3, with dust collectors DC54, DC53, and DC52, respectively, exhausting through Stack Nos. 139, 137, and 138, respectively;
 - (cc) **one (1) upstairs dry mix central vacuum system, collecting fugitive raw materials at a maximum rate of 105 pounds per hour, with emissions controlled by a dust collector, and emissions exhausted through Stack 140;**
 - (dd) four (4) scrubbers, designated PKL Rotoclone, BRL, C1L, and C2L, for removal of carbon dioxide refrigerant from the employee occupied area, exhausting through Stack Nos. 52, 60, 70, and 65, respectively;
 - ~~(gg)~~ **hh** one (1) stick welding operation.

(3) Condition D.2.1: Condition D.2.1 shall be amended as follows to add the 326 IAC 6-3-2 PM limit for the proposed vacuum system.

- (a) Pursuant to 326 IAC 6-3 (Process Operations), the allowable PM emission rate from each of the facilities designated as items (b) through (f) and (m) through ~~(bbcc)~~ listed above shall not exceed the following pounds per hour limitations:

Stack ID	326 IAC 6-3-2 Allowable PM Emissions (lb/hr)
8	0.88
20	40.04
21	40.04
37	37.77
48	40.04
55	0.82
61	14.22
66	2.91
67	2.91
68	0.88
69	2.91
71	2.91
98a	27.90
98b	27.90
104	27.90
105	27.90
108	2.91
137	40.04

Stack ID	326 IAC 6-3-2 Allowable PM Emissions (lb/hr)
138	22.27
139	30.51
140	0.551
150	27.90
151	7.58
152	22.27
153	19.18
154	19.18
160	5.38
162	7.37
163	30.51

- (4) Condition D.2.1(b): Condition D.2.1(b) shall be amended as follows to account for the proposed vacuum system.

(b) Pursuant to 326 IAC 6-3-2, the dust collectors for the pneumatic conveyance steps shall be in operation at all times when raw materials are being conveyed and the dust collectors for the vacuum systems shall be in operation at all times that the vacuum systems ~~is~~are in operation.

- (5) Condition D.2.4: Condition D.2.4 shall be amended as follows to account for the proposed vacuum system.

D.2.4 Particulate Matter (PM)

The dust collectors for PM control shall be in operation at all times when the pneumatic conveyance steps or the vacuum systems are in operation.

- (6) Condition D.2.6: Condition D.2.6 shall be amended as follows to account for the proposed vacuum system.

D.2.6 Parametric Monitoring

The Permittee shall record the total static pressure drop across each of the dust collectors (DC62, DC04, DC09, DC37, DC30, DC50, DC61, DC17, DC16, DC15, DC18, DC24, DC38, DC48, DC12, DC13, DC36, DC53, DC52, DC54, DC01034, DC10005, DC10023, BL11052, BL12092, ~~and~~ BL01005, **and upstairs dry mix central vacuum system dust collector**) used in conjunction with the pneumatic conveyance steps and the vacuum systems, at least once weekly when the pneumatic conveyance steps and the vacuum systems are in operation when venting to the atmosphere. Unless operated under conditions for which the Compliance Response Plan specifies otherwise, the pressure drop across the dust collectors shall be maintained within the ranges listed below or a range established during the latest stack test. The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when the pressure reading is outside of the above mentioned range for any one reading.

Baghouse ID	Pressure Drop Range (inches of water)
DC62	7.0 to 10.0
DC04	2.0 to 5.0
DC09	3.0 to 6.0
DC37	2.0 to 5.0
DC30	1.0 to 4.0
DC50	2.0 to 5.0
DC61	2.0 to 5.0
DC17	2.0 to 5.0
DC16	2.0 to 5.0
DC15	2.0 to 5.0
DC18	2.0 to 5.0
DC24	2.0 to 5.0
DC38	2.0 to 5.0
DC48	2.0 to 5.0
DC12	2.0 to 5.0
DC13	2.0 to 5.0
DC36	2.0 to 5.0
DC53	2.0 to 5.0
DC52	2.0 to 5.0
DC54	2.0 to 5.0
DC01034	2.0 to 5.0
DC10005	2.0 to 5.0
DC10023	2.0 to 5.0
BL11052	2.0 to 5.0
BL12092	2.0 to 5.0
BL01005	2.0 to 5.0
Central vac dust collector	2.0 to 5.0

Condition D.2.7: Condition D.2.7 shall be amended as follows to account for the proposed vacuum system.

D.2.7 Baghouse Inspections

An inspection shall be performed each calendar quarter of all bags controlling the pneumatic conveyance steps and the vacuum systems when venting to the atmosphere. A baghouse inspection shall be performed within three months of redirecting vents to the atmosphere and every three months thereafter. Inspections are optional when venting to the indoors. All defective bags shall be replaced.

All other conditions of the permit shall remain unchanged and in effect. Please attach a copy of this letter and the following revised permit pages to the front of the original permit.

This decision is subject to the Indiana Administrative Orders and Procedures Act - IC 4-21.5-3-5. If you have any questions on this matter, please contact Scott Fulton, at (800) 451-6027, press 0 and ask for Scott Fulton or extension (3-5691), or dial (317) 233-5691.

Sincerely,

Original Signed by Paul Dubenetzky
Paul Dubenetzky, Chief
Permits Branch
Office of Air Quality

Attachments
SDF

cc: File - Floyd County
U.S. EPA, Region V
Floyd County Health Department
Air Compliance Section Inspector - Ray Schick
Compliance Data Section - Karen Nowak
Administrative and Development
Technical Support and Modeling - Michele Boner

**NEW SOURCE CONSTRUCTION PERMIT
and MINOR SOURCE OPERATING PERMIT
OFFICE OF AIR QUALITY**

**General Mills
707 Pillsbury Lane
New Albany, Indiana 47150**

(herein known as the Permittee) is hereby authorized to construct and operate subject to the conditions contained herein, the emission units described in Section A (Source Summary) of this permit.

This permit is issued to the above mentioned company under the provisions of 326 IAC 2-1.1, 326 IAC 2-5.1, 326 IAC 2-6.1 and 40 CFR 52.780, with conditions listed on the attached pages.

Operation Permit No.: MSOP 043-10995-00050	Date Issued: 11-09-99
First Notice Only Change No.: 043-12251-00050	Date Issued: 06-30-00
Second Notice Only Change No.: 043-13907-00050	Date Issued: 02-28-01
Third Notice Only Change No.: 043-15519-00050	Date Issued: 02-22-02
Fourth Notice Only Change No.: MSOP 043-15987-00050	Affected Pages: 6, 19, 20, 21, 22, 23, and 24, with 24a added
Issued by: Original Signed by Paul Dubenetzky Paul Dubenetzky, Branch Chief Office of Air Management	Issuance Date: September 6, 2002

- (bb) three (3) pneumatically conveyed unloader bins, designated Nos. 1, 2, and 3, with dust collectors DC54, DC53, and DC52, respectively, exhausting through Stack Nos. 139, 137, and 138, respectively;
- (cc) one (1) upstairs dry mix central vacuum system, collecting fugitive raw materials at a maximum rate of 105 pounds per hour, with emissions controlled by a dust collector, and emissions exhausted through Stack 140;
- (dd) four (4) scrubbers, designated PKL Rotoclone, BRL, C1L, and C2L, for removal of carbon dioxide refrigerant from the employee occupied area, exhausting through Stack Nos. 52, 60, 70, and 65, respectively;
- (ee) one (1) Safety Kleen cold cleaner degreaser, designated No. 87, exhausting inside, using a maximum of 0.056 gallons of solvent per day;
- (ff) one (1) 12,000 gallon No. 2 fuel oil storage tank, exhausting through Stack No. 12, constructed in 1978;
- (gg) two (2) 14,000 gallon alcohol storage tanks, exhausting through Stack Nos. 13 and 14, respectively, constructed in 1982 and 1985, respectively; and
- (hh) one (1) stick welding operation.

SECTION D.2

EMISSIONS UNIT OPERATION CONDITIONS

Emissions unit Description

- (b) one (1) pneumatic flour conveyance and storage system with dust collector DC01034, exhausting through Stack No. 150;
- (c) one (1) pneumatic dusting flour conveyance and storage system with dust collector RC16002, exhausting through Stack No. 151 (which now exhausts inside the building);
- (d) one (1) pneumatic sugar conveyance with an air / material separator which exhausts through Stack No. 164, and a storage system with a sock vent which exhausts inside the building;
- (e) two (2) pneumatically conveyed ribbon blenders with dust collectors DC10005 and DC10023 exhausting through Stack Nos. 153 and 154, respectively;
- (f) a vacuum system with three (3) dust collectors designated BL11052, BL12092, and BL01005 exhausting through Stack Nos. 160, 162, and 163, respectively;
- (m) one (1) pneumatically conveyed cookie blender with dust collector DC62, exhausting through Stack No. 8;
- (n) one (1) pneumatically conveyed vertical tower bin, designated No. 4, with dust collector DC04, exhausting through Stack No. 20;
- (o) one (1) pneumatically conveyed vertical tower bin, designated No. 9, with dust collector DC09, exhausting through Stack No. 21;
- (p) one (1) pneumatically conveyed dusting flour reclaim bin with dust collector DC37, exhausting through Stack No. 37;
- (q) one (1) pneumatically conveyed horizontal bin with dust collector DC30, exhausting through Stack No. 48;
- (r) one (1) pneumatically conveyed sugar grinding bin, designated No. 58, with dust collector DC50, exhausting through Stack No. 55;
- (s) one (1) pneumatically conveyed flour cooler with dust collector DC61, exhausting through Stack No. 61;
- (t) two (2) pneumatically conveyed flour reclaim collectors, designated C1L and C2L, with dust collectors DC17 and DC16, respectively, exhausting through Stack Nos. 66 and 67, respectively;
- (u) one (1) pneumatically conveyed flour reclaim collector, designated PCL, with dust collector DC15, exhausting through Stack No. 68;
- (v) one (1) pneumatically conveyed flour reclaim collector, designated HJL, with dust collector DC18, exhausting through Stack No. 69;

- (w) one (1) pneumatically conveyed flour reclaim collector, designated BRL, with dust collector DC24, exhausting through Stack No. 71;
- (x) one (1) pneumatically conveyed penthouse collector, designated PC, with dust collector DC38, exhausting through Stack No. 98a;
- (y) one (1) pneumatically conveyed surge bin, designated PC, with dust collector DC48, exhausting through Stack No. 98b;
- (z) two (2) pneumatically conveyed starch bins, designated Nos. 12 and 13, with dust collectors DC12 and DC13, respectively, exhausting through Stack Nos. 104 and 105, respectively;
- (aa) one (1) pneumatically conveyed flour bin, designated Western, with dust collector DC36, exhausting through Stack No. 108;
- (bb) three (3) pneumatically conveyed unloader bins, designated Nos. 1, 2, and 3, with dust collectors DC54, DC53, and DC52, respectively, exhausting through Stack Nos. 139, 137, and 138, respectively;
- (cc) one (1) upstairs dry mix central vacuum system, collecting fugitive raw materials at a maximum rate of 105 pounds per hour, with emissions controlled by a dust collector, and emissions exhausted through Stack 140;
- (dd) four (4) scrubbers, designated PKL Rotoclone, BRL, C1L, and C2L, for removal of carbon dioxide refrigerant from the employee occupied area, exhausting through Stack Nos. 52, 60, 70, and 65, respectively;
- (hh) one (1) stick welding operation.

Emission Limitations and Standards

D.2.1 Particulate Matter (PM) [326 IAC 6-3]

- (a) Pursuant to 326 IAC 6-3 (Process Operations), the allowable PM emission rate from each of the facilities designated as items (b) through (f) and (m) through (cc) listed above shall not exceed the following pounds per hour limitations:

Stack ID	326 IAC 6-3-2 Allowable PM Emissions (lb/hr)
8	0.88
20	40.04
21	40.04
37	37.77
48	40.04
55	0.82

61	14.22
66	2.91
67	2.91
68	0.88
69	2.91
71	2.91
98a	27.90
98b	27.90
104	27.90
105	27.90
108	2.91
137	40.04
138	22.27
139	30.51
140	0.551
150	27.90
151	7.58
152	22.27
153	19.18
154	19.18
160	5.38
162	7.37
163	30.51

The pounds per hour limitation was calculated with the following equation:

Interpolation and extrapolation of the data for the process weight rate up to 60,000 pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67} \quad \text{where } E = \text{rate of emission in pounds per hour; and} \\ P = \text{process weight rate in tons per hour}$$

- (b) Pursuant to 326 IAC 6-3-2, the dust collectors for the pneumatic conveyance steps shall be in operation at all times when raw materials are being conveyed and the dust collectors for the vacuum systems shall be in operation at all times that the vacuum systems are in operation.
- (c) Pursuant to 326 IAC 6-3 (Process Operations), the allowable PM emission rate from the welding operation shall not exceed 0.0012 pounds per hour when operating at a process weight rate of 0.01 pounds per hour based on the above equation.

D.2.2 Preventive Maintenance Plan [326 IAC 1-6-3]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for these emissions units and their control devices.

Compliance Determination Requirements [326 IAC 2-5.1-3(e)(2)] [326 IAC 2-6.1-5(a)(2)]

D.2.3 Testing Requirements [326 IAC 2-1.1-11]

The Permittee is not required to test these emissions units by this permit. However, IDEM may require compliance testing when necessary to determine if the emissions unit is in compliance. If testing is required by IDEM, compliance with the PM limits specified in Condition D.2.1 shall be determined by a performance test conducted in accordance with Section C - Performance Testing.

D.2.4 Particulate Matter (PM)

The dust collectors for PM control shall be in operation at all times when the pneumatic conveyance steps or the vacuum systems are in operation.

Compliance Monitoring Requirements [326 IAC 2-5.1-3(e)(2)] [326 IAC 2-6.1-5(a)(2)]

D.2.5 Visible Emissions Notations

- (a) Visible emission notations of the dust collector stack exhausts shall be performed once per shift during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.
- (b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.
- (c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.
- (d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.
- (e) The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed.

D.2.6 Parametric Monitoring

The Permittee shall record the total static pressure drop across each of the dust collectors (DC62, DC04, DC09, DC37, DC30, DC50, DC61, DC17, DC16, DC15, DC18, DC24, DC38, DC48, DC12, DC13, DC36, DC53, DC52, DC54, DC01034, DC10005, DC10023, BL11052, BL12092, BL01005, and upstairs dry mix central vacuum system dust collector) used in conjunction with the pneumatic conveyance steps and the vacuum systems, at least once weekly when the pneumatic conveyance steps and the vacuum systems are in operation when venting to the atmosphere. Unless operated under conditions for which the Compliance Response Plan specifies otherwise, the pressure drop across the dust collectors shall be maintained within the ranges listed below or a range established during the latest stack test. The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when the pressure reading is outside of the above mentioned range for any one reading.

Baghouse ID	Pressure Drop Range (inches of water)
DC62	7.0 to 10.0
DC04	2.0 to 5.0
DC09	3.0 to 6.0
DC37	2.0 to 5.0
DC30	1.0 to 4.0
DC50	2.0 to 5.0
DC61	2.0 to 5.0
DC17	2.0 to 5.0
DC16	2.0 to 5.0
DC15	2.0 to 5.0
DC18	2.0 to 5.0
DC24	2.0 to 5.0
DC38	2.0 to 5.0
DC48	2.0 to 5.0
DC12	2.0 to 5.0
DC13	2.0 to 5.0
DC36	2.0 to 5.0
DC53	2.0 to 5.0
DC52	2.0 to 5.0
DC54	2.0 to 5.0
DC01034	2.0 to 5.0
DC10005	2.0 to 5.0
DC10023	2.0 to 5.0
BL11052	2.0 to 5.0
BL12092	2.0 to 5.0
BL01005	2.0 to 5.0
Central vac dust collector	2.0 to 5.0

The instrument used for determining the pressure shall comply with Section C - Pressure Gauge Specifications, of this permit, shall be subject to approval by IDEM, OAM, and shall be calibrated at least once every six (6) months.

D.2.7 Baghouse Inspections

An inspection shall be performed each calendar quarter of all bags controlling the pneumatic conveyance steps and the vacuum systems when venting to the atmosphere. A baghouse inspection shall be performed within three months of redirecting vents to the atmosphere and every three months thereafter. Inspections are optional when venting to the indoors. All defective bags shall be replaced.

D.2.8 Broken or Failed Bag Detection

In the event that bag failure has been observed:

- (a) The affected compartments will be shut down immediately until the failed units have been repaired or replaced. Within eight (8) hours of the determination of failure, response steps according to the timetable described in the Compliance Response Plan shall be initiated. For any failure with corresponding response steps and timetable not described in the Compliance Response Plan, response steps shall be devised within eight (8) hours of discovery of the failure and shall include a timetable for completion. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).
- (b) For single compartment baghouses, failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

Record Keeping and Reporting Requirement [326 IAC 2-5.1-3(e)(2)] [326 IAC 2-6.1-5(a)(2)]

D.2.9 Record Keeping Requirements

- (a) To document compliance with Condition D.2.5, the Permittee shall maintain records of daily visible emission notations of the dust collector stack exhausts.
- (b) To document compliance with Condition D.2.6, the Permittee shall maintain the following:
 - (1) Daily records of the following operational parameters during normal operation when venting to the atmosphere:
 - (A) Inlet and outlet differential static pressure for each dust collector; and
 - (B) Cleaning cycle: frequency and differential pressure
 - (2) Documentation of all response steps implemented, per event .
 - (3) Operation and preventive maintenance logs, including work purchases orders, shall be maintained.
 - (4) Quality Assurance/Quality Control (QA/QC) procedures.
 - (5) Operator standard operating procedures (SOP).
 - (6) Manufacturer's specifications or its equivalent.

- (7) Equipment "troubleshooting" contingency plan.
- (8) Documentation of the dates vents are redirected.
- (c) To document compliance with Condition D.2.7, the Permittee shall maintain records of the results of the inspections required under Condition D.2.7 and the dates the vents are redirected.
- (d) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.